

**Major Facility Review (Title V)  
Semi-Annual Monitoring Report**

**for**

**East Bay Municipal Utility District  
Main Wastewater Treatment Plant  
Facility #A0591**

**Reporting Period: July 1, 2016 – December 30, 2016**

Source	Monitoring Requirement	Limit	Monitoring Results
<b>S-55 Boiler</b>	<p><b>Condition 20651</b></p> <p>2. Shall not operate S-55 boiler when more than two of the three cogen engines S-37, S-38, or S-39 are operating</p> <p>3. Boiler gross heat input</p> <p>5a. NOx emission from boiler 5b. CO emission from boiler</p> <p>18. Daily records of hours of operation, fuel consumption</p> <p>19. Annual performance test for emission limits in 5</p>	<p>20.41 MMBtu/hr</p> <p>30ppm 50ppm</p>	<p>Condition met. See Attachment 1 for boiler and engine data.</p> <p>Condition met. See Attachment 2. Heat input ranged from 5.0-11.5 MMBtu/hr.</p> <p>See 19 for test results if annual tests run in monitoring period</p> <p>See Attachment 1 for hours and gas consumption.</p> <p>Condition met. Annual performance test completed on 12/14/16. See Attachment 3 for results.</p>
<b>S-37, S-38, S-39 Cogeneration Engines</b>	<p><b>Condition 20651</b></p> <p>Emission limits –</p> <p>6. NOx emissions from S-38 7. POC emissions from S-38 8. CO emissions from S-38 9. Filterable particulate emissions from S-38 10. NOx emissions from S-37 &amp; S-39 11. CO emissions from S-37 &amp; S-39</p> <p>13. Thermal throughput per engine</p> <p>14. Combined hours of operation for S-37, S-38, and S-39</p> <p>15. Combined diesel consumption for S-37, S-38, and S-39</p>	<p>1.25 g/hp-hr 0.6 g/hp-hr 3.0 g/hp-hr 0.085 g/hp-hr</p> <p>70 ppmvd 2000 ppmvd</p> <p>25 MMBtu/hr</p> <p>25,316 hours in any rolling 365 day period</p> <p>150,000 gallons in any rolling 365 day period</p>	<p>For items 6-11 see 19 for test results if annual tests run in monitoring period</p> <p>Condition met. See Attachment 2.</p> <p>Condition met. 11,692 hours in last year. See Attachment 2. Jan-Jun 2016: 6,552 hours Jul-Dec 2016: 5,140 hours</p> <p>Condition met. 20,643 gallons in last year. See Attachment 2. Jan-Jun 2016: 11,908 gallons Jul-Dec 2016: 8,735 gallons</p>

Source	Monitoring Requirement	Limit	Monitoring Results
S-37, S-38, S-39 Cogeneration Engines (continued)	18. Daily records of hours of operation, fuel consumption  19. Annual performance test for emission limits in 6-11		Condition met. See Attachment 1 for records.  Condition met for engine #3. Annual performance test completed 9/20/16. See Attachment 3 for report.
S-48 Gasoline Dispensing Facility	<b>Condition 25107</b>  The Static Pressure Performance Test (Leak Test) ST-38 shall be successfully conducted at least once in each twelve consecutive month period.		Condition met. Completed on 11/14/16. See Attachment 4.
	<b>Condition 21663</b>  Annual gasoline throughput	334,000 gal per year	Condition met. 35,769 gal in last year. See Attachment 5. Jan-June 2016: 17,646 gal July-Dec 2016: 18,123 gal
S-50 Diesel Engine Back-up Generator	<b>Condition 22830</b>  1. Hours of operation	30 hours/year reliability-related hours	Condition met. Generator ran 0.1 hours in last 12 months. Refer to Attachment 6.
S-51 Diesel Engine Back-up Generator	<b>Condition 22850</b>  1. Hours of operation	50 hours/year reliability-related hours	Condition met. Generator ran 13.2 hours in last 12 months. Refer to Attachment 6.
S-52 Diesel Engine Back-up Generator	<b>Condition 22820</b>  1. Hours of operation.	20 hours/year reliability-related hours	Condition met. Generator ran 0.1 hours in last 12 months. Refer to Attachment 6.
	<b>Condition 19184</b> (BAAQMD permit)  2. Diesel fuel – sulfur content	<0.005% by weight	Condition met. All deliveries of diesel to Plant were CARB ULSD, 15ppm sulfur or less. See Attachment 7.
S-53 Diesel Engine Back-up Generator	<b>Condition 22830</b>  1. Hours of operation	30 hours/year reliability-related hours	Condition met. Generator ran 0.5 hours in last 12 months. Refer to Attachment 6.

Source	Monitoring Requirement	Limit	Monitoring Results
<b>S-54 Diesel Engine Back-up Generator</b>	<b>Condition 22850</b>  1. Hours of operation	50 hours/year reliability-related hours	Condition met. Generator ran 2 hours in last 12 months. Refer to Attachment 6.
<b>S-56 Turbine</b>	<b>Condition 24050</b>  2. Total combined heat input   3. NOx emission limits   4. CO emission limit   5. SO2 emission limit  7. Annual turbine source test  8. Monthly NOx and CO test	389,820 MMBtu in any 12-month period   23 ppm (15-min) 34,400 lb (12-mo)   100 ppm (15-min) 92,200 lb (12-mo)   150 ppmv	Condition met. 348,415 MMBtu in last 12 months. Refer to Attachment 2. Jan-Jun 2016: 178,916 MMBtu Jul-Dec 2016: 169,499 MMBtu  Emission limits met. Refer to Attachments 2 and 8. Annual mass emission: 10,051 lb Jan-Jun 2016: 3,325 lb Jul-Dec 2016: 6,726 lb  Emission limits met. Refer to Attachment 2 and 8. Annual mass emission: 2,070 lb Jan-Jun 2016: 840 lb Jul-Dec 2016: 1,230 lb  Emission limit met. Refer to Attachments 3 and 8.  Condition met. Turbine annual test done on 12/14/16 by Blue Sky Environmental. See Attachment 3 for results.  Condition met. Monthly test results are located in Attachment 8.
<b>S-100 Municipal Wastewater Treatment Plant</b>	<b>Condition 21759</b>  1. Total wastewater flow	120 MGD monthly dry weather average 325 MGD monthly wet weather average	Condition met. Maximum monthly flow in period was 76 MGD influent. See Attachment 9.

Source	Monitoring Requirement	Limit	Monitoring Results
<b>S-110 Headworks</b>  <b>A-461 &amp; A-462 Carbon Bed Scrubbers</b>	<b>Condition 17335</b>  3. Inlet and outlet H <sub>2</sub> S concentrations of carbon beds, as well as any other appropriate operating parameters shall be continuously monitored and reviewed on a daily basis to determine when carbon adsorption bed breakthrough is imminent or has been reached.		Monitoring results for inlet and outlet H <sub>2</sub> S and any noted outages are in Attachment 10.  Maintenance records for scrubber are in Attachment 11.
<b>S-170 Sludge handling</b>	<b>Condition 18006</b>  1. Monitor and record on a daily basis the activated sewage sludge throughput through S-170.		Sludge throughput is recorded in Attachment 12. Maintenance records for the scrubber are in Attachment 11.
<b>S-180 Anaerobic Digesters</b>	<b>Condition 18860</b>  2. Monthly inspection of digesters  3. Sulfur content of digester gas  4. Weekly sampling and testing of digester gas for H <sub>2</sub> S  5. Hours of flaring per day	< 340 ppmv	Inspections conducted by Operations on daily rounds.  Condition not met on 8/16/16, 8/25/16, 11/9/16, and 12/23/16. Refer to Attachment 13 for the H <sub>2</sub> S gas sampling records.  Refer to Attachment 13.  Refer to Attachment 1 for the hours of flaring per day.

Attachment Index:

- 1 Combustion Source Air Permit Data
- 2 Combustion Summaries – Boiler, Engines, Turbine, Flares
- 3 Annual Source Test Summaries: Boiler, Engine #3, Turbine
- 4 Annual Gasoline Dispensing Facility Leak Test Results
- 5 Gasoline Facility Throughput
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